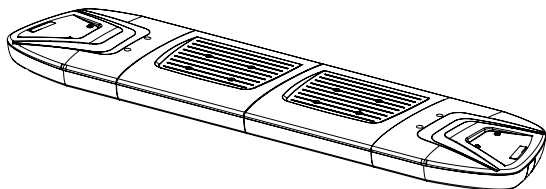


# nROADS®

LED Lightbar - Single Color



**IMPORTANT NOTICE TO INSTALLER:** Make sure to read and understand all instructions and warnings before proceeding with the installation of this product. Ensure that the manual and any warning cards are delivered to the end user of this equipment. Proper installation of the lightbar requires the installer to have a thorough knowledge of automotive electronics, systems, and procedures. Lightbars provide an essential function of an effective visual warning system. The use of the lightbar does not ensure that all drivers can or will abide by or react to an emergency warning signal, especially at high rates of speeds or long distances. The operator of the vehicle must never take the right of way for granted and it is the operator's responsibility to proceed safely. The effectiveness of the lightbar is highly dependant on the correct mounting and wiring. The installer must read and follow the manufacturer's installation instructions and warnings in the manual. The vehicle operator should verify daily that the lightbar is securely fastened to the vehicle and properly functioning before operating vehicle. The lightbar is intended for use by authorized personnel only. It is the user's responsibility to ensure they understand and operate the emergency warning devices in compliance with the applicable local, state and federal laws and regulations. SoundOff Signal assumes no liability for any loss resulting from the use of this warning device.

## Components/Contents

Standard Equipment:

1 - nROADS® Fleet LED Lightbar built to your specifications

Other Parts that may be included depending on your configuration:

1 - Vehicle Specific Hook Kit w/ Hardware\*

2 - Fixed Height Mounting Brackets w/ Hardware or

1 - Flat Mount Hardware Kit or

2 - Headache Brackets w/ Hardware

\*Kits will vary with each lightbar depending on vehicle specified on order form.

## Unpack Lightbar

1. Remove the lightbar from box and packaging.
2. Save packaging for later shipping.
3. Check components/contents.
4. Please reference these instructions for proper wiring and installation.

## Tools Required for Installation

- 7/16" Socket with ratchet
- Phillips Head Screwdriver
- Drill bit #30

# SoundOff Signal

1.800.338.7337 / [www.soundoffsignal.com](http://www.soundoffsignal.com)

## NOTICE:

Installers and users must comply with all applicable federal, state and local laws regarding use and installation of warning devices. *Improper use or installation may void warranty coverage. To review our Limited Warranty Statement & Return Policy for this or any SoundOff Signal product, visit our website at [www.soundoffsignal.com/sales-support](http://www.soundoffsignal.com/sales-support). If you have questions regarding this product, contact **Technical Services**, Monday - Friday, 8 a.m. to 5 p.m. or after hours 5 p.m. to 8 p.m. EST at 1.800.338.7337 (press #4 to skip the automated message). Questions or comments that do not require immediate attention may be emailed to [techservices@soundoffsignal.com](mailto:techservices@soundoffsignal.com).*

SUPERIOR CUSTOMER RELATIONSHIPS. SMARTLY DESIGNED LIGHTING & ELECTRONIC SOLUTIONS.

## TABLE OF CONTENTS

| PAGE | CONTENT                                    |
|------|--|
| 1    | COMPONENTS/ CONTENTS                       |
| 2    | MODULE SPECIFICATIONS                      |
| 3    | TECHNICAL/ POWER SPECIFICATIONS            |
| 4    | FIXED HEIGHT BRACKETS AND HOOK MOUNTING    |
| 5    | GASKET MOUNTING & WIRE SLEEVE INSTRUCTIONS |
| 6    | INPUT WIRE DEFINITIONS                     |
| 7-10 | ELECTRICAL INSTALLATION                    |
| 11   | LIGHT MODULE REPLACEMENT                   |
| 12   | nROADS TROUBLESHOOTING                     |
| 13   | REPLACEMENT PARTS                          |
| 14   | WARRANTY AND RETURN GOODS PROCEDURE        |

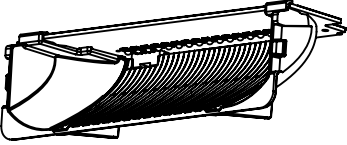
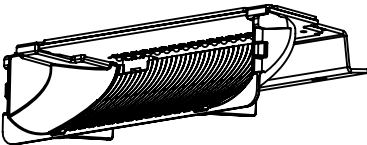
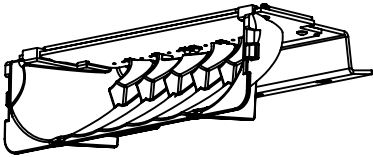
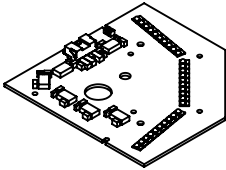
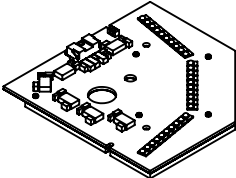
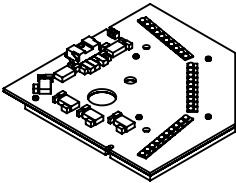
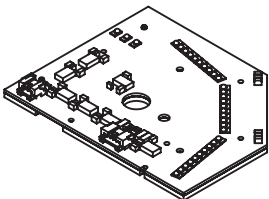
## Important Information: \_\_\_\_\_

- Warning devices are strictly regulated and governed by Federal, State and Municipal ordinances. These devices shall be used ONLY on approved vehicles. It is the sole responsibility of the user of these devices to ensure compliance.
- DO NOT install this product or route any wires in the Air Bag Deployment Zone. Refer to your vehicle Owner's Manual for the location of any air bag deployment zones.
- DO NOT connect this device to a strobe power supply. This product is self-contained and does not require an external power supply.

## **! WARNING**

This product contains high intensity LED devices. To prevent eye damage, DO NOT stare into the light beam at close range.

## MODULE SPECIFICATIONS

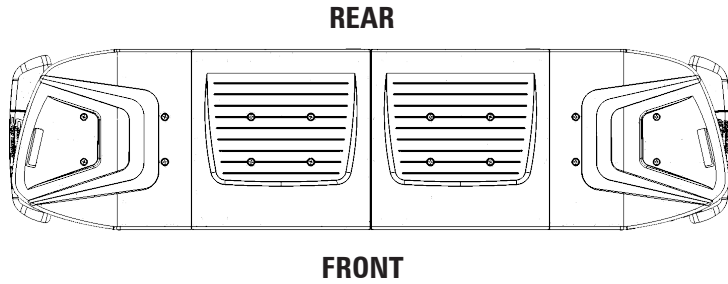
|   |   |
|---|---|
|    | <p><b>6 LED Single Color Inboard Module</b></p> <p>INPUT VOLTAGE RANGE: 10-16Vdc<br/>           CURRENT DRAW: 0.2 Amps (Flashing) / 0.4 Amps (Steady On)<br/>           POWER @ 12.8Vdc: 2.6W (Flashing) / 5.2W (Steady On)</p>                 |
|    | <p><b>9 LED Single Color Inboard Module</b></p> <p>INPUT VOLTAGE RANGE: 10-16Vdc<br/>           CURRENT DRAW: 0.3 Amps (Flashing) / 0.6 Amps (Steady On)<br/>           POWER @ 12.8Vdc: 3.9W (Flashing) / 7.8W (Steady On)</p>                 |
|    | <p><b>6 LED White Takedown Module</b></p> <p>INPUT VOLTAGE RANGE: 10-16Vdc<br/>           CURRENT DRAW: 0.2 Amps (Flashing) / 0.4 Amps (Steady On)<br/>           POWER @ 12.8Vdc: 2.6W (Flashing) / 5.2W (Steady On)</p>                       |
|   | <p><b>9 LED Single Color Corner Module</b></p> <p>INPUT VOLTAGE RANGE: 10-16Vdc<br/>           CURRENT DRAW: 0.3 Amps (Flashing) / 0.6 Amps (Steady On)<br/>           POWER @ 12.8Vdc: 3.9W (Flashing) / 7.8W (Steady On)</p>                  |
|  | <p><b>12 LED Single Color Corner Module</b></p> <p>INPUT VOLTAGE RANGE: 10-16Vdc<br/>           CURRENT DRAW: 0.4 Amps (Flashing) / 0.8 Amps (Steady On)<br/>           POWER @ 12.8Vdc: 5.2W (Flashing) / 10.4W (Steady On)</p>                |
|  | <p><b>18 LED Single Corner Module</b></p> <p>INPUT VOLTAGE RANGE: 10-16Vdc<br/>           CURRENT DRAW: 0.6 Amps (Flashing)<br/>           POWER @ 12.8Vdc: 7.8W (Flashing)</p>   |
|  | <p><b>Corner Module with Integrated Alley Light Module</b></p> <p>INPUT VOLTAGE RANGE: 10-16Vdc<br/>           CURRENT DRAW: 0.25 Amps (Flashing) / 0.5 Amps (Steady On)<br/>           POWER @ 12.8Vdc: 3.2W (Flashing) / 6.4W (Steady On)</p> |

FLASHING = AVERAGE  
 STEADY ON (100%) = PEAK

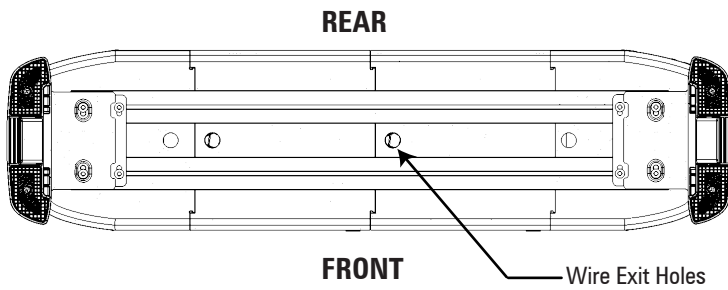
# nROADS<sup>®</sup>

LED Lightbar - Single Color

## TOP VIEW WITH COVERS ON



## BOTTOM VIEW



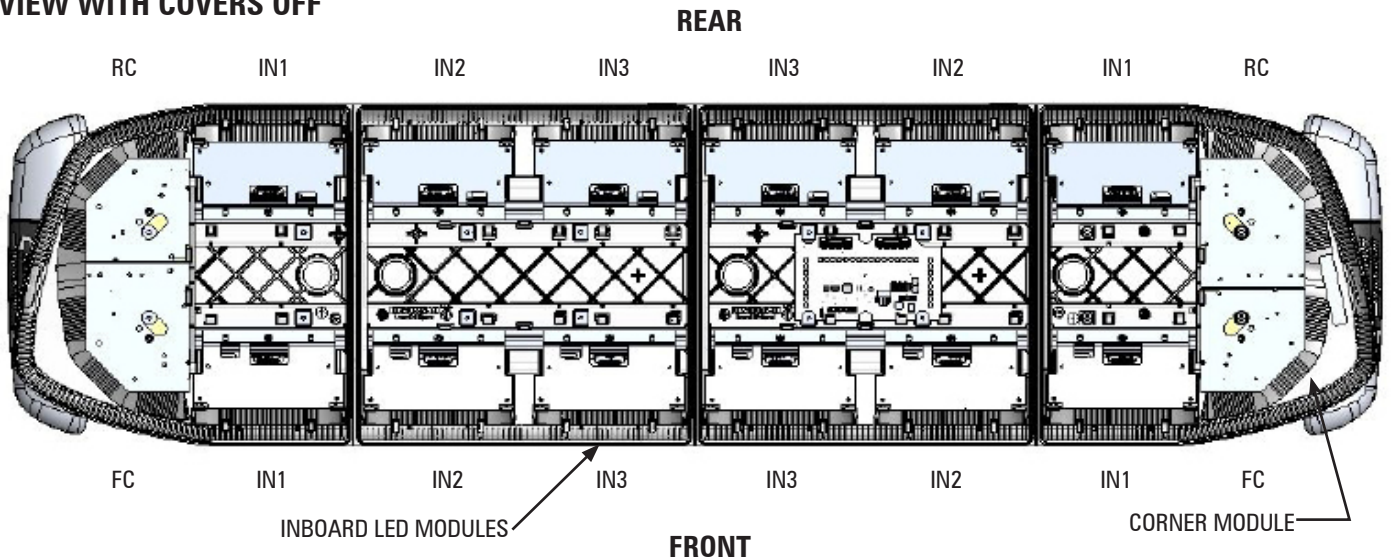
## TECHNICAL SPECIFICATIONS

| Material:              | Aluminum Base, polycarbonate outer lenses, ASA/PC top cover. |                       |
|------------------------|--|-----------------------|
| Roof Attachments:      | 1/4" bolt Stainless A2                                       |                       |
| Operating Temperature: | -40° to +65° C   |                       |
| LENGTH                 | # OF INBOARDS  | DIMENSIONS            |
| 36"                    | 4  | 12"D x 2.5" H Inboard |
| 42"                    | 5  |                       |
| 48"                    | 6  |                       |
| 54"                    | 7  |                       |
| 60"                    | 8  |                       |

## POWER SPECIFICATIONS

| Input Voltage Range: | 10 -16 Vdc  |                           |
|----------------------|---|---------------------------|
| Light Bar Component  | Current Draw  | Power Consumption (Watts) |
| Standby Current      | <0.10 mA  | 14 mW                     |
| Reverse Polarity     | Protected   |                           |
| Load Dump            | Protected   |                           |
| Wiring               | Power Cable 15ft, 16 AWG Wires, (+) Red, (-) Black<br>Control Cable 15ft, 22 AWG, 8 or 12 Conductor<br>STT Cable 15ft, 22AWG, 4 Conductor |                           |

## TOP VIEW WITH COVERS OFF



# nROADS®

LED Lightbar - Single Color

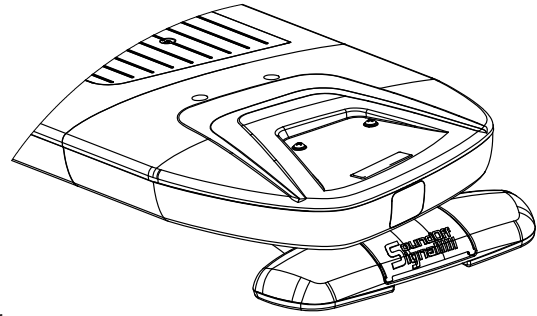


Figure 1.

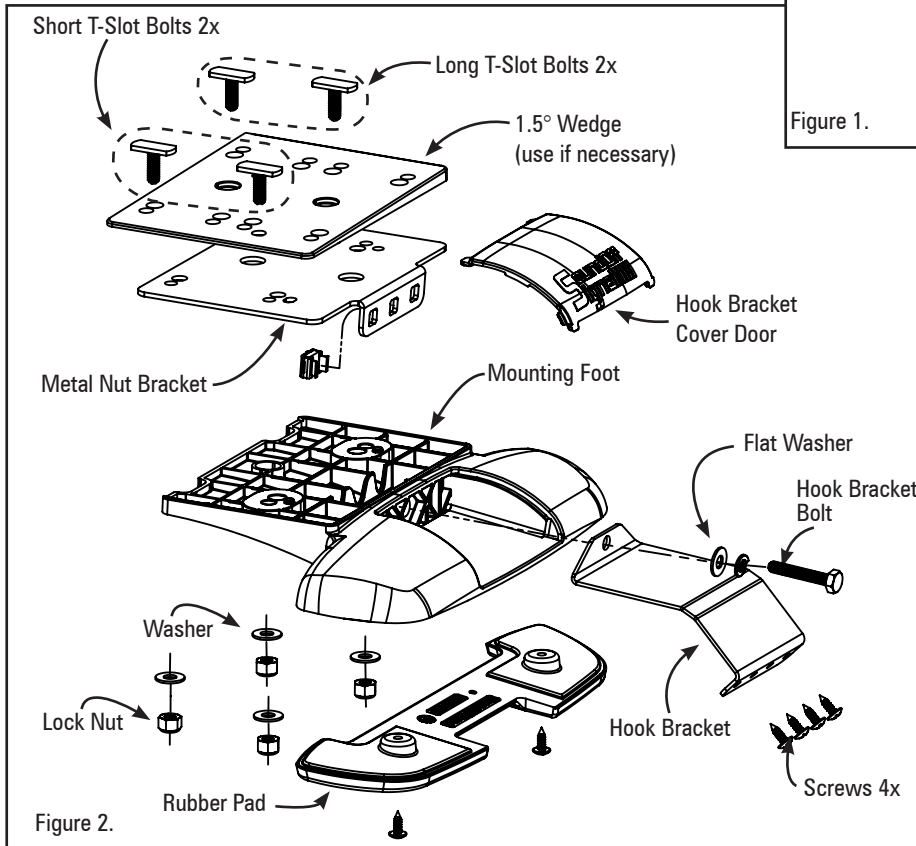


Figure 2.

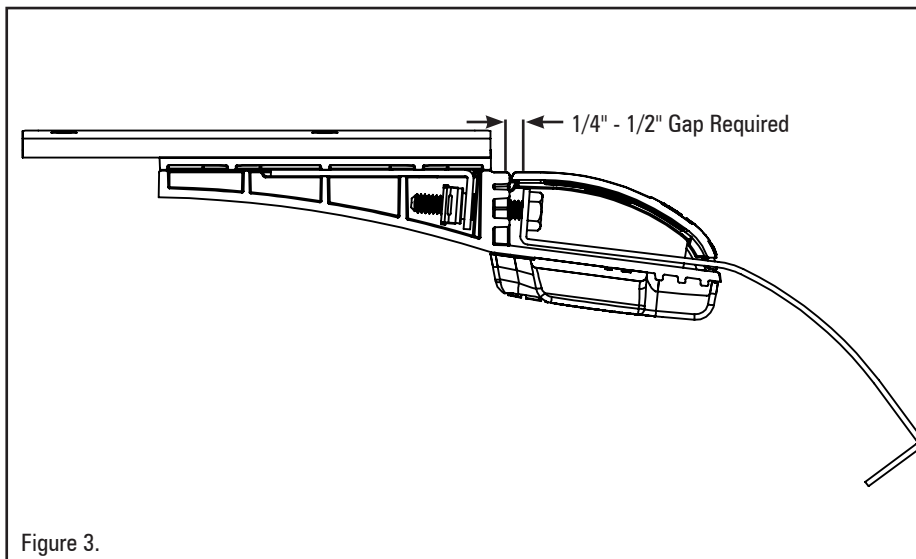


Figure 3.

## FIXED HEIGHT BRACKETS AND HOOK MOUNTING (NON-PURSUIT ONLY)

1. Keeping the lightbar level with the road, attach Mounting Feet to the roof of the vehicle using the 2 supplied T-Slot bolts. If the lightbar needs to be leveled, a 1.5° wedge has been provided.
2. Place lightbar centered on the roof, and hold brackets up to the lightbar. A 1/4" to 1/2" gap should be between the hook bracket and front wall of the mounting foot prior to putting any tension on the hook bracket bolt (See Figure 3). Adjust the mounting foot position to accommodate for this gap.
3. Tighten 2 lock nuts to secure mounting foot to lightbar with max torque between 80-90in/lbs. **DO NOT OVERTIGHTEN!**
4. Using holes in the hook bracket as a template, drill 4 holes in the roof using the appropriate size drill. Secure hook bracket to roof with 4 screws on each side.
5. Tighten the hook bracket bolts, torque details below:

Due to different vehicle construction and mounting locations, the torque levels for connecting hooks to the lightbar foot may be different based on the vehicle.

- A. Minimum requirement for torque should be 10 IN/LB, with a maximum level of 45 IN/LB.\*
- B. When installing the bolts connecting the hook to the lightbar foot, monitor both the lightbar and roof of the vehicle.
- C. Tighten to ensure there is no movement of the lightbar or foot by ensuring there is no movement either side to side, or front to rear after the torque has been done.

The lightbar must be securely mounted to the vehicle for safe operation.

\*Deflection of the lightbar and/or the roof of the vehicle may occur when torquing the bolts connecting the hook to the lightbar foot. Any deflection should be kept at a minimum to avoid damage to the lightbar or vehicle.

6. Install the cover door over the hook bracket bolt to finish the assembly. Place tab of one side into place and then push the second tab into place with a flat-head screw driver.

**NOTE:** As always, it is recommended to check the integrity of mounted lightbars on a daily basis to ensure secure attachment to the vehicle for continued safe operation.

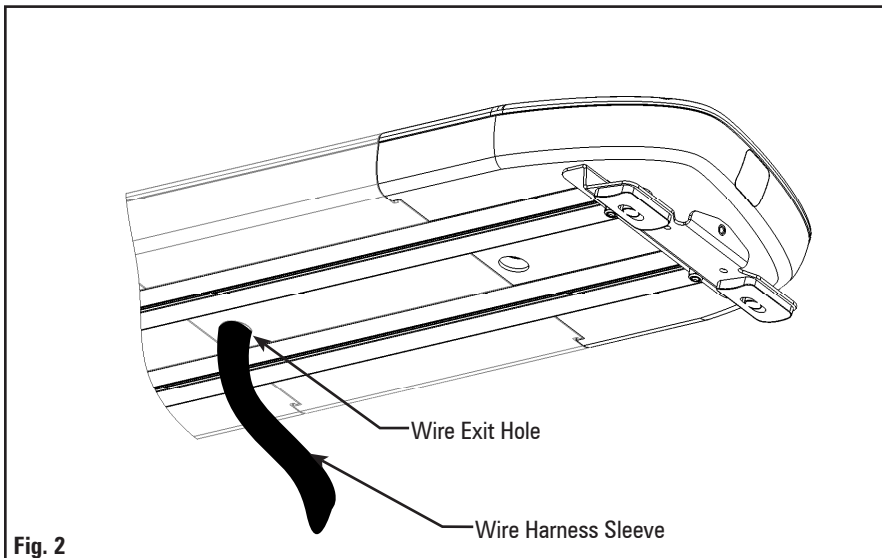
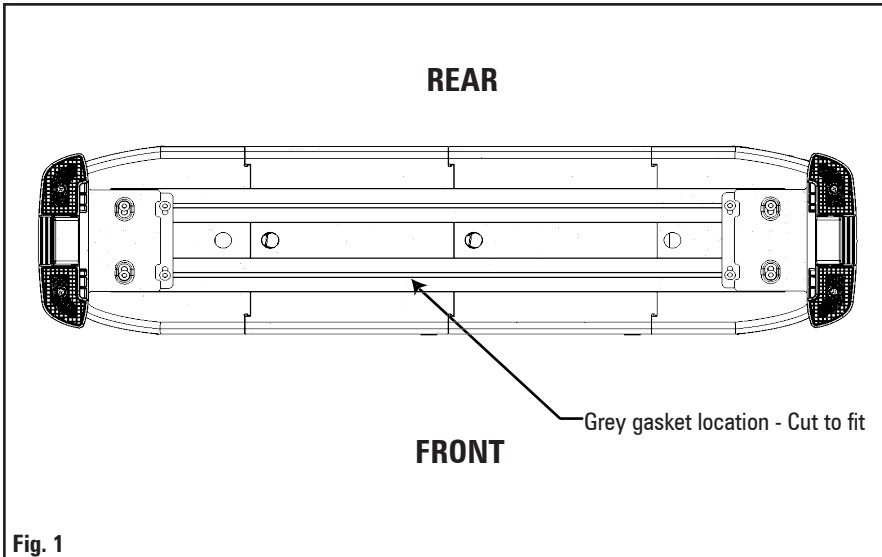
6. Install the cover door over the hook bracket bolt to finish the assembly. Place tab of one side into place and then push the second tab into place with a flat-head screw driver.

## ⚠ WARNING

Route wires only in locations that are not subjected to potential wear. Make sure to avoid routing wires in the deployment area of your air bag. Refer to your vehicle's owner's manual for airbag deployment zone.

# nROADS<sup>®</sup>

LED Lightbar - Single Color



## GASKET MOUNTING INSTALLATION

1. Install the Grey gasket in the front slot of the lightbar as shown in Fig 1.

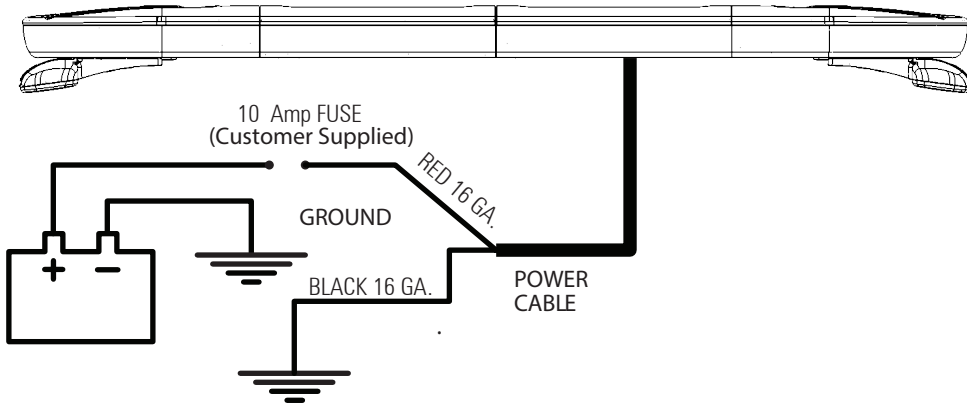
## WIRE SLEEVE INSTALLATION

1. Unspool all harnesses coming out of the lightbar.
2. Feed all harnesses through the sleeve until the sleeve is positioned at the exit hole under the lightbar.
3. Continue sliding the sleeve through the rubber gasket until it hits a hard stop (should be an additional 1-2 inches).
4. Use the included zip tie to clamp around the end of the sleeve opposite the lightbar.

\*\*See Fig. 2 for reference\*\*

# nROADS<sup>®</sup>

## LED Lightbar - Single Color



### Control Wire Connections

Based on required functions of the lightbar, connect the following wires to switches capable of providing +12V at a minimum of 1mA to the 8 or 12 control wire harness.

|  | Wire Color | nROADS Functions     |
|--|------------|----------------------|
| Standard Controls available with 8 and 12 wire control harness | White      | Pattern Select       |
|  | Blue       | Front Warning Mode 1 |
|  | Green      | Front Warning Mode 2 |
|  | Brown      | Takedown             |
|  | Orange     | Work Light           |
|  | Yellow     | Rear Warning Mode 1  |
|  | Red        | Rear Warning Mode 2  |
|  | Black      | Low Power            |
| Only available with 12 wire control harness                    | Tan        | Cruise Lights        |
|  | Violet     | Right Arrow          |
|  | Pink       | Left Arrow           |
|  | Gray       | Right/Left Alley     |

### STT Wire Connections

If STT modules are installed in the lightbar, connect the following wires from the 4 wire harness as listed below to the stop, turn, tail wires which provides +12V at a minimum of 1mA when the function is active. If the vehicle is a 3 wire system, the Red wire will not be used.

| Wire Color | nROADS Functions |
|------------|------------------|
| Red        | Stop             |
| Yellow     | Left Turn        |
| Green      | Right Turn       |
| Brown      | Tail             |

## ELECTRICAL INSTALLATION

### Featured Highlights & Terminology:

**Cruise Mode:** Allows the user to program selected lights to “glow” when this feature is activated.

**Directional Arrow Built-in:** The directional controller is built-in with arrow patterns for each of the 3 modes (left arrow, right arrow, and center out arrow). The 12 wire control harness is required to activate this feature.

**Scene Light Mode:** Allows the user to program selected lights to turn steady on when this feature is activated to provide additional scene lighting. The 12 wire control harness is required to activate this feature.

**Stop / Tail / Turn Mode:** If lightbar is built with stop/tail/turn modules, separate control wires are included to control stop, tail, left turn and right turn.

**Low Power Mode:** Operates lighting at reduced intensity.

### Power Cable:

1. Route lightbar power cables as close to vehicles power source (battery) as possible.
2. Connect the BLACK wire to the factory chassis ground right next to the battery.
3. Install a maximum of 10Amp Fuse (customer supplied) to the end of the RED wire of the Lightbar Power Cable.
  - a. Remove the fuse before connecting any wires to the battery.
  - b. DO NOT USE CIRCUIT BREAKER OR FUSIBLE LINK.
4. Connect the other end of the Fuse to the POSITIVE (+) terminal of the battery.
  - a. Do NOT use any more than 2ft of wire between the battery terminal and the fuse and ensure the wire is protected and secured from being cut into; this is non-fused wire.

### Standby Mode (reduced standby current)

If there are no active inputs the lightbar will go into a “standby” mode. The standby mode is a very low power mode that is used to extend the life of your battery. The lightbar will awaken from the standby mode when any input is activated.

## WARNING

ALL CUSTOMER SUPPLIED POWER WIRES CONNECTING TO THE POSITIVE (+) OR NEGATIVE (-) BATTERY TERMINAL OR LOCAL CHASIS GROUND (-) MUST BE SIZED TO SUPPLY AT LEAST 125% OF THE MAXIMUM CURRENT AND PROPERLY FUSED AT THE POWER SOURCE WITH APPROPRIATELY RATED FUSE.

## IMPORTANT

WHEN PASSING CABLES THROUGH FIREWALL OR OTHER SHEETMETAL, INSERT GROMMET TO PROTECT THE CABLE!

## WARNING

Route wires only in locations that are not subjected to potential wear. Make sure to avoid routing wires in the deployment area of your air bag. Refer to your vehicle's owner's manual for airbag deployment zone.



# nROADS®

## LED Lightbar - Single Color

### Warning Flash Pattern Configuration:

- Apply power to product
- Connect desired function wire(s) to power (i.e. Front Warning, Rear Warning)
- Momentarily connect Pattern Select wire to GND for defined amount of time to change the flash pattern or set up function mode per table below
- State is programmed upon releasing the pattern select wire from GND
- If pattern is changed, the pattern number will flash on the left and right corner modules with "10s" flashed on the left side and "1s" flashed on the right side

| Warning Pattern Set-Up Table |        |  |  |
|------------------------------|--------|--|--|
| Time                         | Output | Action   | Action w/Takedown Active                                   |
| ≤1 sec                       | High   | Forward 1 pattern                                  | Takedown will flash with warning                           |
| 1 to ≤2 sec                  | Low    | Backward 1 pattern                                 | Takedown will not flash with warning                       |
| 2 to ≤3 sec                  | OFF    | Reset to default pattern (takedown doesn't change) | Reset to default takedown setting (pattern doesn't change) |
| 3 to ≤4 sec                  | High   | Forward 1 Phase Mode                               | No effect - return to normal operation                     |
| 4 to ≤5 sec                  | Low    | Forward 1 Color Mode                               | No effect  |
| 5 to ≤6 sec                  | OFF    | Reset to default phase & color setting             | No effect  |
| >6 sec                       | Normal | No action taken. No pattern change will occur      | No effect  |

### Arrow Flash Pattern Configuration:

- Apply power to product
- Connect desired function wire(s) to power (Left Arrow, Right Arrow or both for Center Arrow)
- Momentarily connect Pattern Select wire to GND for defined amount of time to change the flash pattern or set function mode per table below
- State is programmed upon releasing the pattern select wire from GND
- If pattern is changed, the pattern number will flash on the left and right corner modules with "10s" flashed on the left side and "1s" flashed on the right side

| Arrow Set-Up Table |        |  |  |
|--------------------|--------|--|--|
| Time               | Output | Action   | Action w/Takedown Active                                   |
| ≤1 sec             | High   | Forward 1 pattern                                  | Takedown will flash with warning                           |
| 1 to ≤2 sec        | Low    | Backward 1 pattern                                 | Takedown will not flash with warning                       |
| 2 to ≤3 sec        | OFF    | Reset to default pattern (takedown doesn't change) | Reset to default takedown setting (pattern doesn't change) |
| 3 to ≤4 sec        | High   | Set arrow to rear/front/both                       | No effect  |
| 4 to ≤5 sec        | Low    | Set arrow to length                                | No effect  |
| 5 to ≤6 sec        | OFF    | Reset to default settings                          | No effect  |
| >6 sec             | Normal | No action taken. No pattern change will occur      | No action taken. No pattern change will occur              |



# nROADS®

## LED Lightbar - Single Color

fpm=Flashes per Minute  
fps=Flashes per Second

### FLASH PATTERNS

Default

| #  | Name                  | SAE Compliant | Cal. Title 13 Compliant | Phase               | fpm       | fps       |
|----|-----------------------|---------------|-------------------------|---------------------|-----------|-----------|
| 1  | RandomAction 1        | Y             |                         | Variable            |           |           |
| 2  | RandomAction 2        |               |                         | Variable            |           |           |
| 3  | RandomAction 3        |               |                         | Variable            |           |           |
| 4  | RandomAction 4        |               | Y                       | Variable            |           |           |
| 5  | Quint                 | Y             |                         | Programmable        | 67        | 1.1       |
| 6  | Quad2                 | Y             |                         | Programmable        | 67        | 1.1       |
| 7  | Q-Switch™             | Y             |                         | Programmable        |           |           |
| 8  | Double2               | Y             |                         | Programmable        | 115       | 1.9       |
| 9  | Power Pulse           | Y             |                         | Programmable        | 188       | 3.1       |
| 10 | Road Runner           | Y             | Y                       | Programmable        | 115       | 1.9       |
| 11 | Slow Runner           | Y             | Y                       | Programmable        | 70        | 1.2       |
| 12 | Warp                  |               |                         | Programmable        | 333       | 5.6       |
| 13 | Intercycle            |               |                         | Programmable        | 67 & 333  | 1.1 & 5.6 |
| 14 | Warp 1, 2, 3          |               |                         | Programmable        | 115 - 333 | 1.9 - 5.6 |
| 15 | E-Single              |               |                         | Programmable        |           |           |
| 16 | E-Double              |               |                         | Programmable        |           |           |
| 17 | E-Triple              |               |                         | Programmable        |           |           |
| 18 | Cross-Fire            |               |                         | 2X Individual Sweep |           |           |
| 19 | Super Scan            |               |                         | Dual Rate Pulse/Alt |           |           |
| 20 | Power Flash           |               |                         | Dual Rate Alt/Pulse |           |           |
| 21 | Thunder and Lightning |               |                         | Random              |           |           |
| 22 | Steady ON             |               |                         | 60% DC              |           |           |
| 23 | OFF                   |               |                         | OFF                 |           |           |

### CRUISE PATTERNS

| # | Phase       |
|---|-------------|
| 1 | Constant On |
| 2 | Flicker     |

### PHASE MODE

| # | Phase                                  |
|---|--|
| 1 | Variable: Alt L/R, Alt Int, Alt In/Out |
| 2 | Alt In/Out                             |
| 3 | Alt L/R                                |

### ARROW MODE

| # | Arrow Location |
|---|----------------|
| 1 | Rear           |
| 2 | Front          |
| 3 | Rear + Front   |

### ARROW PATTERNS

| #  | Name                        | SAE Compliant | Cal. Title 13 Compliant |
|----|-----------------------------|---------------|-------------------------|
| 1  | Single Fast                 |               |                         |
| 2  | Single Slow                 |               |                         |
| 3  | Chaser Fast                 |               |                         |
| 4  | Chaser Slow                 |               |                         |
| 5  | Fill Fast                   |               |                         |
| 6  | Fill Slow                   |               |                         |
| 7  | Grow/Shrink                 |               |                         |
| 8  | Warning w/Arrow             |               |                         |
| 9  | Warning w/Arrow Fill        |               |                         |
| 10 | Arrow Random 1              |               |                         |
| 11 | Arrow Random 2              |               |                         |
| 12 | Rotate 250                  | Y             |                         |
| 13 | Race 100 (Rotate w/ Chaser) | Y             | Y                       |
| 14 | Race 200 w/ TriplePop       |               |                         |

# nROADS<sup>®</sup>

## LED Lightbar - Single Color

### Takedown and Work-light Configuration:

- Apply power to product
- Connect takedown / worklight input to power.
- Momentarily connect Pattern Select wire to GND for defined amount of time to change the takedown/worklight setting per table below.

**Note that all Modes are used even if lightbar doesn't have the affected modules (e.g. a 36" bar does not have F3 or F4).**

- State is programmed upon releasing the pattern select wire from GND.

| Mode # | Position<br>(Single Color) |           |
|--------|----------------------------|-----------|
|        | Takedown                   | Worklight |
| 1      | F1                         | R1        |
| 2      | F2                         | R2        |
| 3      | F3                         | R3        |
| 4      | F4                         | R4        |
| 5      | F1, F2                     | R1, R2    |
| 6      | F1, F3                     | R1, R3    |
| 7      | F1, F4                     | R1, R4    |
| 8      | F2, F3                     | R2, R3    |
| 9      | F2, F4                     | R2, R4    |
| 10     | F3, F4                     | R3, R4    |
| 11     | None                       | None      |

| Takedown/Work Light Set-Up |        |   |
|----------------------------|--------|---|
| Time                       | Output | Action                                      |
| ≤ 1 sec                    | High   | Forward 1 mode                              |
| 1 to ≤ 2 sec               | Low    | Backward 1 mode                             |
| 2 to ≤ 3 sec               | OFF    | Reset to default settings                   |
| > 3 sec                    | High   | No action taken. Return to normal operation |

### Cruise Configuration:

- Apply power to product
- Connect cruise input to power
- Momentarily connect Pattern Select wire to GND for defined amount of time to change the cruise setting per table below
- State is programmed upon releasing the pattern select wire from GND

| Time         | Output | Action                                      |
|--------------|--------|---|
| ≤ 1 sec      | High   | Forward 1 mode                              |
| 1 to ≤ 2 sec | Low    | Backward 1 mode                             |
| 2 to ≤ 3 sec | OFF    | Reset to default settings                   |
| 3 to ≤ 4 sec | High   | Cruise set to solid on                      |
| 4 to ≤ 5 sec | Low    | Cruise set to flicker                       |
| 5 to ≤ 6 sec | OFF    | Increment brightness (3%-8% duty cycle)     |
| > 6 sec      | Normal | No action taken. Return to normal operation |

| Position Key |                   |
|--------------|-------------------|
| FC           | Front Corner      |
| RC           | Rear Corner       |
| F(X)         | Front Inboard 1-4 |
| R(X)         | Rear Inboard 1-4  |

| Cruise Mode Set-Up |  |
|--------------------|--|
| Mode #             | Position<br>(Single Color)               |
| 1                  | FC, RC                                   |
| 2                  | FC, F1<br>RC, R1                         |
| 3                  | FC, F1, F2<br>RC, R1, R2                 |
| 4                  | FC, F1, F2, F3<br>RC, R1, R2, R3         |
| 5                  | FC, F1, F2, F3, F4<br>RC, R1, R2, R3, R4 |
| 6                  | FC, F1, F2, F3, F4<br>RC                 |
| 7                  | F1, F2, F3, F4                           |
| 8                  | FC, F1, F2, F3, F4                       |
| 9                  | FC, F1, F2, F3                           |
| 10                 | FC, F1, F2                               |
| 11                 | FC, F1                                   |
| 12                 | FC                                       |
| 13                 | RC                                       |
| 14                 | RC, R1                                   |
| 15                 | RC, R1, R2                               |
| 16                 | RC, R1, R2, R3                           |
| 17                 | RC, R1, R2, R3, R4                       |
| 18                 | R1, R2, R3, R4                           |
| 19                 | FC<br>RC, R1, R2, R3, R4                 |

# nROADS<sup>®</sup>

## LED Lightbar - Single Color

### REPLACEMENT OF INBOARD AND CORNER MODULES:

1. Disconnect main power.
2. Remove top cover by removing screws.
3. Locate module.
4. Push down on black tab to un-clip the module.
5. Remove connector from rear of module by carefully pulling connector body from back of module.
6. Push module connector into replacement module ensuring locking latch is seated properly and connector is fully seated.
7. Replace screw if the module has a bracket (if no bracket skip this step).
8. Restore power to bar and test new module to ensure functionality.
9. Replace top cover of bar with screws removed in step 2.

### REPLACEMENT OF CONTROLLER BOARD:

1. Disconnect main power.
2. Remove top cover by removing screws.
3. Locate controller board.
4. Remove all wire harness connectors from Controller Board by carefully depressing locking tabs on connector body.
5. Pinch clear plastic tabs to un-clip the Controller Board.
6. Remove Controller Board by sliding towards clear plastic tabs and pulling up.
7. Place new Controller Board into slots and push down allowing clear plastic tabs to “snap” into place.
8. Plug in all wire harness connectors to Controller Board, ensuring locking tabs “snap” locked.
9. Inspect routing of wire harnesses are clear of screw bosses for top cover, and place top cover into position.
10. Set Dip Switches of new board to match settings on previous board.
11. Re-install removed screws to top cover.
12. Restore power to bar and test functionality.

### Dip Switch Settings

| SW1 | SW2 | SW3 | SW4 | SW5 | SW6 | PURPOSE                            |
|-----|-----|-----|-----|-----|-----|------------------------------------|
| 0   | 0   | 0   |     |     |     | Lightbar Length - N/A (4 inboards) |
| 0   | 0   | 1   |     |     |     | Lightbar Length - 36" (4 inboards) |
| 0   | 1   | 0   |     |     |     | Lightbar Length - 42" (5 inboards) |
| 0   | 1   | 1   |     |     |     | Lightbar Length - 48" (6 inboards) |
| 1   | 0   | 0   |     |     |     | Lightbar Length - 54" (7 inboards) |
| 1   | 0   | 1   |     |     |     | Lightbar Length - 60" (8 inboards) |
| 1   | 1   | 0   |     |     |     | Lightbar Length - N/A (8 inboards) |
| 1   | 1   | 1   |     |     |     | Lightbar Length - N/A (8 inboards) |

## nROADS TROUBLESHOOTING

### **NO OPERATION**

Check input power and ground to lightbar, check signal wires for damage and/or opens

**Check Input power wire and verify a minimum of 10.0 Volts is present on the wire**

Check for blown fuse

### **NO TAKEDOWN LIGHTS**

Verify configuration and make sure light modules are configured for takedown function

### **NO LIGHT OPERATION IN ONLY 1 MODULE**

Verify module is not configured as a takedown / worklight that is not configured to flash with warning

Verify connection to module inside lightbar

STT modules will not flash on Arrow

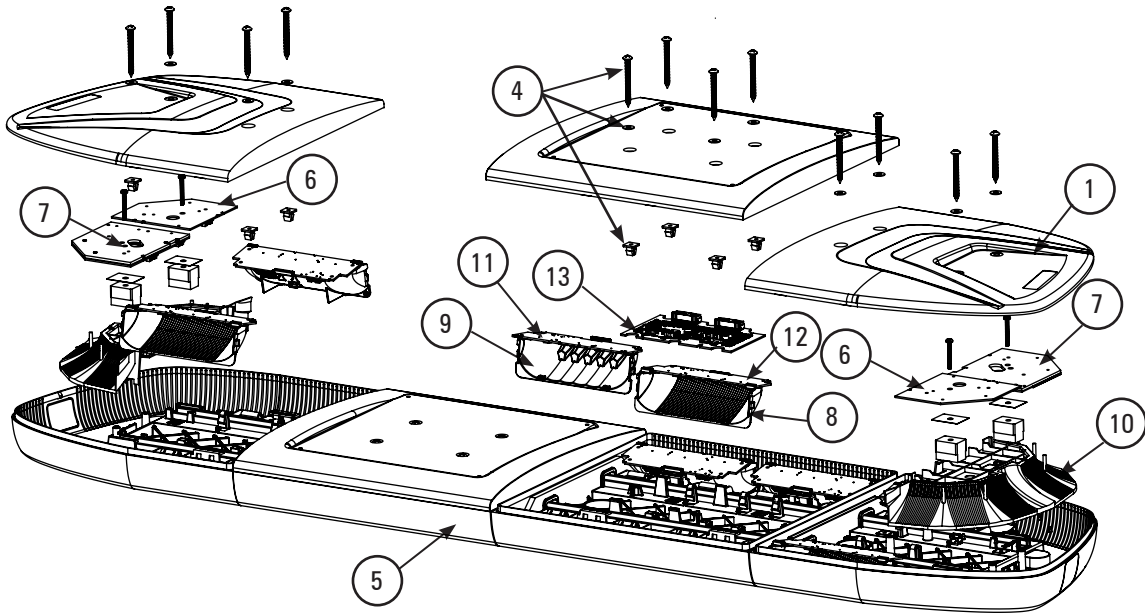
### **ARROW PATTERN INCORRECT LENGTH**

Verify the configured arrow length

Verify correct lightbar length setting on Controller Dip Switches

# nROADS<sup>®</sup>

LED Lightbar - Single Color



## REPLACEMENT PARTS & ACCESSORIES

| ITEM # | PART#       | DESCRIPTION                             | ITEM # | PART#            | DESCRIPTION                                     |
|--------|-------------|---|--------|------------------|---|
|        | PNFLBK00    | STANDARD FIXED HEIGHT MOUNT - THIN PAD  | 1      | PNFLBTT(xx)L(xx) | TOP COVER                                       |
|        | PNFLBF00    | FIXED HEIGHT PERMANENT MOUNT HOOK KIT   | 5      | PNFLBTB(xx)LC    | BOTTOM LENSES - CLEAR LEXAN                     |
|        | PNFLBK02    | HEADACHE RACK MOUNT                     | 12     | PRMLBLS106(x)    | SINGLE COLOR 6 LED INBOARD MODULES              |
|        | PETLF00     | FIXED HEIGHT PERMANENT MOUNT KIT        | 12     | PRMLBLS109(x)    | SINGLE COLOR 9 LED INBOARD MODULES              |
|        | PNFLBK01    | FIXED HEIGHT PERMANENT MOUNT            |        | PRMLBSS106R      | 6 LED STT MODULE                                |
|        | PNFLBK04    | STANDARD FIX HEIGHT MOUNT - 48" TAHOE   | 11     | PRMLBHS106W      | 6 LED TAKEDOWN/WORKLIGHT                        |
|        | PNFLBK05    | STANDARD FIX HEIGHT MOUNT - 54" TAHOE   | 6      | PRMLBCSS109(x)   | SINGLE COLOR 9 LED CORNER AD MODULES            |
|        | PNFLBK06    | FIXED HEIGHT PURSUIT MOUNT THIN PAD     | 6      | PRMLBCSS112(x)   | SINGLE COLOR 12 LED CORNER AD MODULES           |
|        | PNFLBK07    | FIXED HEIGHT PURSUIT MNT THK PAD W/EXT  | 6      | PRMLBCSS118(x)   | SINGLE COLOR 18 LED CORNER AD MODULES           |
|        | PNFLBK08    | FIXED HEIGHT PURSUIT MNT THK PAD NO EXT | 7      | PRMLBCLS109(x)-W | SINGLE COLOR 9 LED CORNER BC MODULE W/ALLEY     |
|        | PNFLBK09    | XTRA FIT <sup>®</sup> HOOK KIT          | 7      | PRMLBCLS112(x)-W | SINGLE COLOR 12 LED CORNER BC MODULE W/ALLEY    |
|        | PRMLBHNST1  | DC STT HARNESS                          | 7      | PRMLBCLS118(x)-W | SINGLE COLOR 18 LED CORNER BC MODULE W/ALLEY    |
|        | PRMLBHPW1   | DC POWER HARNESS                        | 7      | PRMLBCLS109(x)-Z | SINGLE COLOR 9 LED CORNER BC MODULE - NO ALLEY  |
|        | PRMLBHNPT1  | DC CONTROL INPUT HARNESS - 8 WIRE       | 7      | PRMLBCLS112(x)-Z | SINGLE COLOR 12 LED CORNER BC MODULE - NO ALLEY |
|        | PRMLBHNPT2  | DC CONTROL INPUT HARNESS - 12 WIRE      | 7      | PRMLBCLS118(x)-Z | SINGLE COLOR 18 LED CORNER BC MODULE - NO ALLEY |
|        | PNFLBWGKT1  | WEDGE KIT                               | 9      | PNFLBRFTD1       | TD/WL REFLECTOR                                 |
|        | PNFLBHPKT1  | HOLE PLUG KIT                           | 8      | PNFLBRFL845      | INBOARD REFLECTOR                               |
|        | PNFLBFTCV1  | STANDARD FIXED HEIGHT FOOT CAP          | 10     | PNFLBRFC845-(x)  | CORNER REFLECTOR                                |
| 4      | PNFLBTCSKT1 | TOP COVER SCREW KIT                     |        | PNFLBHPW1        | 15 FEET POWER HARNESS (BREAKOUT BOX VERSION)    |
|        | PNFLBWMKT1  | WIRE MANAGEMENT KIT                     |        | PRMLBHPW3        | 25 FEET POWER HARNESS (BREAKOUT BOX VERSION)    |
|        | PRMLBHNMD1  | DC MODULE HARNESS - SINGLE COLOR        |        | PRMLBHPW1        | 15 FEET POWER HARNESS (DIRECT CONNECT VERSION)  |
|        | PRMLBHNSLV  | DC MASTER HARNESS SLEEVE                |        |                  |   |
| 13     | PRMLBDRV1   | DC MOTHERBOARD                          |        |                  |   |

## WARRANTY & RETURN GOODS PROCEDURE

### **CLEANING & CARE OF YOUR LIGHTBAR:**

Keeping the lenses clean and scratch free will optimize the performance of the lightbar. The exterior of the lightbar including lenses should be cleaned with mild soapy water and a soft cotton cloth to remove dirt, grime and insects. Never use window cleaners or harsh chemicals on the lenses; this may cause failure of the lenses or reduce clarity resulting in the reduction of light output.

### **MOUNTING INTEGRITY:**

A review of bolt/hardware/mounting bracket integrity should be performed at the beginning and end of each shift.

### **WARNING MESSAGES - PLEASE READ:**

**WARNING** - DRILLING ANY HOLES INTO THE LIGHTBAR IS NOT RECOMMENDED! THE RISK OF DAMAGING INTERNAL COMPONENTS AND THE RESULTING FAILURE OF THE LIGHTBAR WILL VOID ANY WARRANTY OF THIS PRODUCT.

**WARNING** - CARE MUST BE TAKEN WHEN DRILLING THROUGH THE ROOF OF THE VEHICLE NOT TO DRILL INTO ANY EXISTING WIRING AND NOT TO DRILL THROUGH THE HEADLINER OR SUPPORT MEMBERS OF THE VEHICLE. CHECK BOTH SIDES OF THE MOUNTING SERVICE PRIOR TO DRILLING. DE-BURR ANY HOLES AND REMOVE ANY METAL SHARDS OR REMNANTS. INSTALL GROMMETS INTO ALL WIRE PASSAGE HOLES.

**WARNING** - ROUTE WIRES ONLY IN LOCATIONS THAT ARE NOT SUBJECTED TO POTENTIAL WEAR. MAKE SURE TO AVOID ROUTING WIRES IN THE DEPLOYMENT AREA OF YOUR AIR BAG. REFER TO YOUR VEHICLE OWNER'S MANUAL FOR AIR BAG DEPLOYMENT ZONES.

**WARNING** - ALL CUSTOMER SUPPLIED POWER WIRES CONNECTING TO THE POSITIVE (+) OR NEGATIVE (-) BATTERY TERMINAL OR LOCAL CHASSIS GROUND (-) MUST BE SIZED TO SUPPLY AT LEAST 125% OF THE MAXIMUM CURRENT AND PROPERLY FUSED AT THE POWER SOURCE WITH APPROPRIATELY RATED FUSE.

**IMPORTANT:** When passing cables through fire wall or other sheet metal, insert grommet to protect the cable!

### **WARRANTY RETURN PROCESS:**

Please contact your SoundOff Signal Sales Representative, Customer Services staff or our Technical Department (800.338.7337) for a RMA #, Return Merchandise Authorization Number.

The following information is required for issuance of the RMA #:

- Reason for returning the product\*
- Address where replacement product is to be shipped\*
- Telephone number where you may be reached\*
- SoundOff Signal invoice number on which product was purchased\*\*
- SoundOff Signal part number and serial number\*\*
- E-mail address where RMA # should be e-mailed\*\*
- Fax number where RMA # should be faxed\*\*

\* RMA # will not be given without this information.

\*\* If available, please provide this information.

SoundOff Signal will NOT accept returns without an RMA #. Each RMA # is good for only one (1) return and will expire (30) days after the date it was issued. Products must be shipped back to SoundOff Signal and the RMA # clearly marked on the outside of the package near the shipping label. Please use the following address on your shipping label:

SoundOff Signal  
ATTN: RMA # / Technical Services  
3900 Central Parkway  
Hudsonville, MI 49426

### **WARRANTY EXCLUSIONS:**

Shipping & Handling, labor and service fees are non-refundable. SoundOff Signal is not liable for any damage due to installation or personal injury as a result of using SoundOff Signal product.

### **WARRANTY FORFEITURE:**

Warranty will not be granted if the Warranty Return Policy & Procedure rules are not strictly followed. Physical damage resulting from customer abuse will void warranty. Warranty will also be voided if any SoundOff Signal and/or manufacturer serial tags, product stickers, seals, or the like, are removed, altered or tampered with. Returned product that is damaged by shipping via the RMA # procedure is not the responsibility of SoundOff Signal.

Document effective date on cover and below supersedes previously dated policies and statements.

There are no other warranties, expressed or implied, including, but not limited to, any implied merchantability or fitness for a particular use. SoundOff Signal reserves the right to modify this warranty statement at any time; or to discontinue, modify, or upgrade any products of its manufacture with design improvements without prior notice.